

ABSTRACT

An MCM-type semiconductor device allowing high-speed operation and reduction in power consumption, and is also capable of preventing reliability and yield rate of MCM from degrading. The reduction in power consumption and increase in operation speed are attained by connecting signal lines between in-chip circuits (30), (32) in an electrically direct manner. On the signal line, a protection circuit (406) for electrostatic damage protection is provided. In device fabrication, connection using interconnections (12) between the in-chip circuits (30), (32) is carried out while keeping a protection circuit (406) connected to the signal lines (internal draw-out lines (12a), internal interconnections (14)), by which circuit components can be protected from static electricity even if electric charge accumulated on the semiconductor chips (20), (22) should flow into the signal lines, because the protection circuit (406) can absorb the charge. After the connection is completed, the protection circuit (406) can be disconnected from the signal lines, so as to avoid the protection circuit (406) to function as a load on the in-chip circuits (30), (32) during normal operation, and to thereby prevent the operation speed from decreasing.